



ISS-LF1 / STS-114 Flight Readiness Review



KSC Space Station and Payloads Processing ISS-LF1

Multi-Purpose Logistics Module “Raffaello”
External Stowage Platform 2
Lightweight MPESS Carrier

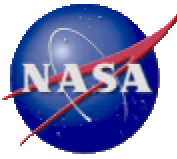


Scott Higginbotham / UB-N
LF1 NASA-KSC Mission Manager
June 29, 2005





Agenda



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- | | |
|--|---------------|
| ● Acronyms | In Back-Up |
| ● Completed Processing Milestones | In Back-Up |
| ● Remaining Processing Milestones | To Be Briefed |
| ● Middeck Experiment Requirements | To Be Briefed |
| ● Launch Delay Requirements | None |
| ● Engineering Status | To Be Briefed |
| ● Issues / Concerns | None |
| ● Certificate of Flight Readiness Exceptions | None |
| ● Readiness Certification | To Be Briefed |
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Remaining LF1 Processing Milestones



Pad B

- Flight Crew Payload Bay Inspection
- Launch Package Closeouts
- Payload Bay Door Closure
- Launch

ECD

30 June 2005
30 June 2005
30 June 2005
13 July 2005



Middeck Experiment Requirements



Payload (Up)

None

Turnover to KSC

N/A

Power/IVT

N/A

Launch Delay

N/A

Payload (Down)

PCG-STES #10

HRF Urine Tube Assy

Yeast-GAP

Turnover to Customer

<= Landing + 6 Hours

<= Landing + 6 Hours

Nominal

Power

Yes

No

No



Engineering Status



Technical Requirements (OMRSD)

- No open Waivers or Exceptions
- One Pending Change: MA16791 – A024, File 10, Volume 3
 - Adds requirements for post-mission ECLSS valve cleaning/bagging
- A review of the Requirements Allocation Matrix has confirmed that all remaining open requirements have been incorporated into the appropriate scheduled procedures for satisfaction

Nonconformances

- All Problem Reports have been closed or deferred

Procedures

- All Payload processing procedures have either been released or are scheduled to be released in time to support all applicable “on the shelf” requirements

Configuration Management

- No issues

Launch Commit Criteria

- None



Readiness Statement



Pending successful completion of the remaining scheduled Pad B operations, both the NASA-KSC International Space Station / Payloads Processing Directorate and the Boeing-Checkout, Assembly, and Payload Processing Services (CAPPS) contractor are ready to proceed with the launch of ISS-LF1/STS-114.



BACK-UP CHARTS



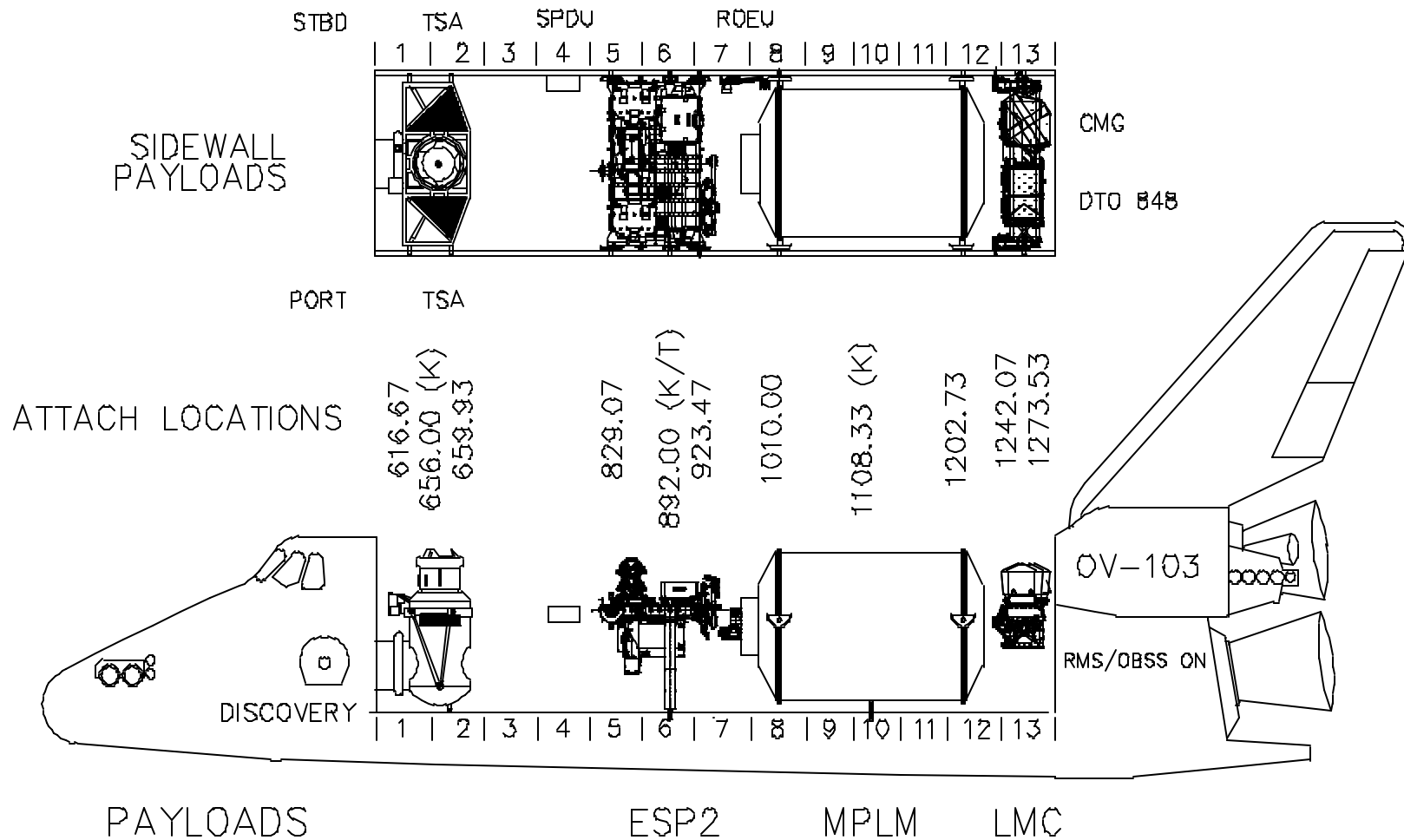
Acronyms



- APCU - Assembly Power Converter Unit
- CEIT - Crew Equipment Interface Test
- CMG - Control Moment Gyroscope
- CRF - Canister Rotation Facility
- DTO - Development Test Objective
- ESP - External Stowage Platform
- ESPAD - External Stowage Platform Attachment Device
- FHRC - Flexible Hose Rotary Coupler
- HRF - Human Research Facility
- KYA - Keel Yoke Assembly
- LMC - Lightweight Multi-purpose experiment support structure Carrier
- MBSU - Main Bus Switching Unit
- MPLM - Multi-Purpose Logistics Module
- PCG - Protein Crystal Growth
- PFRAM - Passive Flight Releasable Flight Attach Mechanism
- PICO - Pre-Installation Check-Out
- STES - Single locker Thermal Enclosure System
- UTA - Utility Transfer Assembly
- VSSA - Video Stanchion Support Assembly



LF-1 Launch Package Configuration





Completed LF1 Processing Milestones



MPLM

- Hatch Installation (Node 3)
- Hatch Bulkhead Modifications
- Hatch Seal Acceptance Testing
- Weld NDE Inspections
- ECLSS Checks
- CBM Leak Checks
- PICO Test
- Rack Installation
- CEIT
- Nominal Cargo Stowage
- AAC Installation / Test
- Late Cargo Stowage
- ICD Walkdown
- Internal Closeouts / Hatch Closure
- Dry Air Purge

Completed

17 September 2004
12 November 2004
3 December 2004
2 February 2005
15 February 2005
24 February 2005
1 March 2005
14 March 2005
18 March 2005
23 March 2005
31 March 2005
5 April 2005
12 April 2005
16 April 2005
17 April 2005



Completed LF1 Processing Milestones



MPLM (continued)

	Completed
● External Closeouts	21 April 2005
● Canister Rotation to Vertical / Transfer to O&C	26 April 2005
● Decision to Return MPLM to SSPF	25 May 2005
● Canister Rotation to Horizontal / Transfer to SPPF	26 May 2005
● Transfer to Footprint #3 Rotation Stand	27 May 2005
● Air Sample Collection / Hatch Opening	31 May 2005
● Rack Taping / Closeouts Start	31 May 2005
● Rack Taping Complete	2 June 2005
● Closeouts / Hatch Closure Complete	6 June 2005
● Hatch Leak Checks Complete	7 June 2005
● Dry Air Purge Complete	8 June 2005
● Gross Leak Checks Complete	9 June 2005
● SSPF Closeouts Complete / Transfer to Canister	10 June 2005
● Canister Rotation to Vertical	11 June 2005



Completed LF1 Processing Milestones



Research (HRF-2)

- Initial PTCS Test
- Refrigerated Centrifuge PTCS Test
- Final ITCS Fill
- Installation into MPLM
- Closeouts (Round 1)
- Fastener Re-torque & Centrifuge Rework
- Closeouts (Round 2)

Completed

10 December 2004
15 February 2005
17 February 2005
8 March 2005
16 April 2005
2 June 2005
3 June 2005



Completed LF1 Processing Milestones



LMC

- Shear Bolt Replacement
- DTO-848 Match Drilling
- CMG Turnover to KSC
- DTO-848 Sample Box Installation
- CMG Installation
- DTO-848 Sample Installation
- Closeouts
- Weight and C.G. / Transfer to Canister
- Decision to Proceed with LMC PFRAM Rework
- Move from Canister to Footprint #4
- CMG IA Removal
- PFRAM Rework Complete
- CMG IA Reinstallation
- Electrical Checkouts / Closeouts Complete
- Move From Footprint #4 to Canister

Completed

15 June 2004
25 October 2004
18 January 2005
17 February 2005
14 March 2005
15 March 2005
15 April 2005
20 April 2005
3 June 2005
6 June 2005
6 June 2005
7 June 2005
7 June 2005
9 June 2005
9 June 2005



Completed LF1 Processing Milestones



ESP-2

- UTA Transfer to SPPF
- VSSA Transfer to SPPF
- MBSU Transfer to SPPF
- FHRC Transfer to SPPF
- CEIT (@SPPF)
- ORU Integration / Closeouts (@SPPF)
- Weight and C.G. (@SPPF)
- ICD Walkdown (@SPPF)
- Delivery to KSC
- Transfer to Canister
- Decision to Proceed with ESP-2 ESPAD Rework
- Move from Canister to Footprint #8
- ESPAD and EFRAM Rework Complete
- Cleaning / Closeouts Complete
- Move From Footprint #8 to Canister

Completed

14 February 2005
18 February 2005
24 February 2005
28 February 2005
18 March 2005
31 March 2005
7 April 2005
11 April 2005
18 April 2005
19 April 2005
1 June 2005
3 June 2005
7 June 2005
8 June 2005
8 June 2005



Completed LF1 Processing Milestones



Integrated Operations

- ESP-2 KYA Installation into Orbiter (OPF)
- APCU Delta IVT (OPF)
- Launch Package Transfer to Pad B
- SSV Transfer to Pad B
- Launch Package Transfer to Orbiter
- Launch Package Electrical Mates
- Launch Package / Orbiter IVT

Completed

9 February 2005
18 February 2005
13 June 2005
15 June 2005
17 June 2005
27 June 2005
27 June 2005